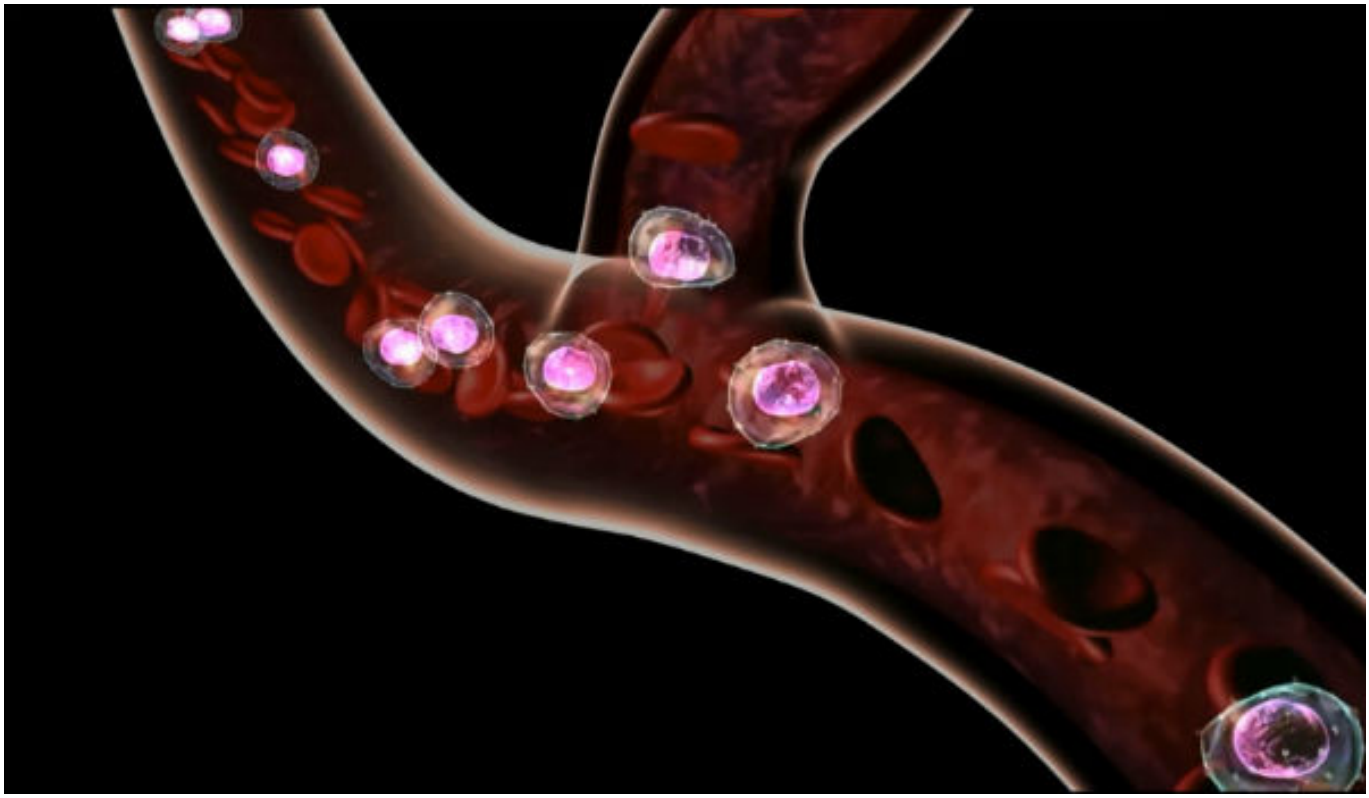
# Photos of the Day: Top 10 Medical Innovations for 2014

Cleveland Clinic

Cleveland Clinic has released their Top 10 innovations for 2014.

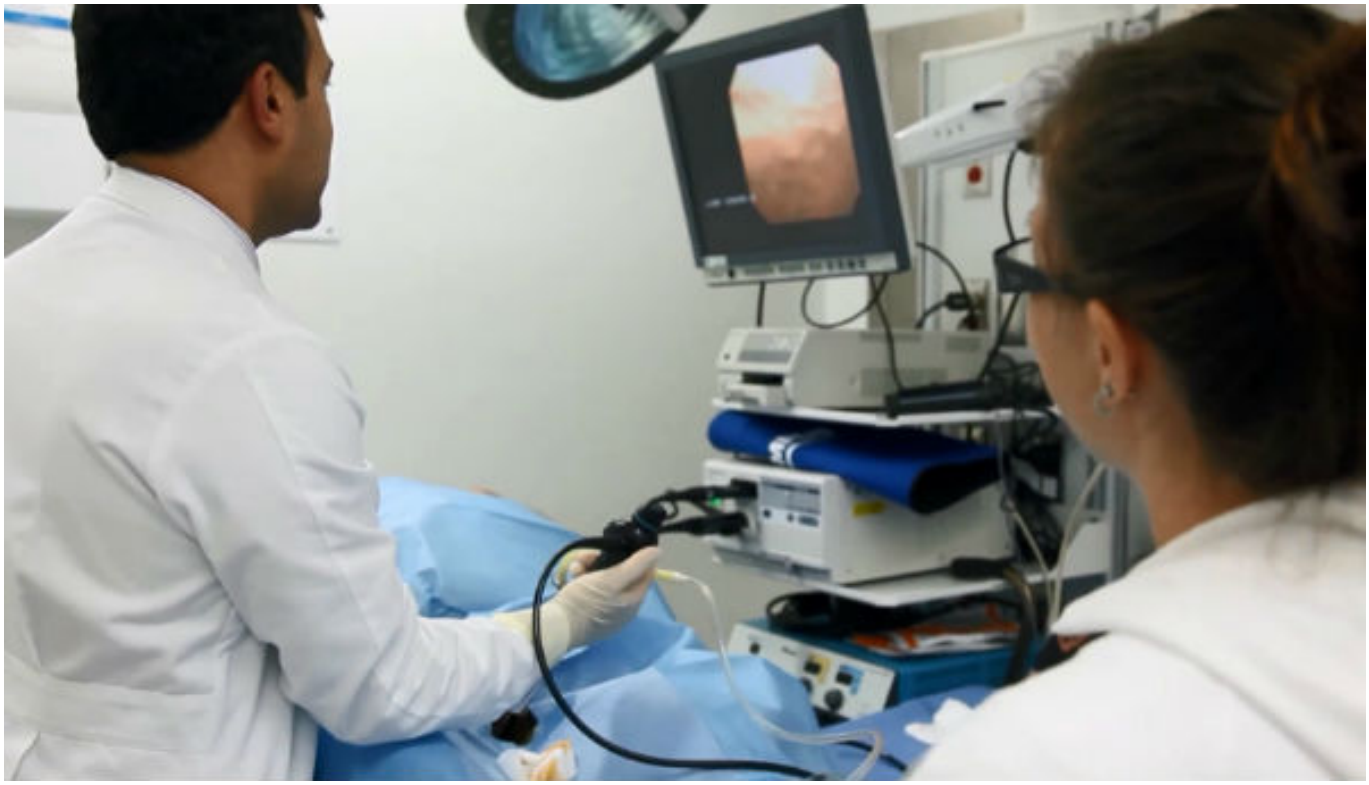


**#10 B-Cell Receptor Pathway Inhibitors**

ibrutinib, a first-in-class oral B-cell receptor pathway inhibitor, targets the molecules that help cancer grow and spread. It kills malignant B-cells while sparing other healthy cells and leaving important parts of the immune system largely intact.

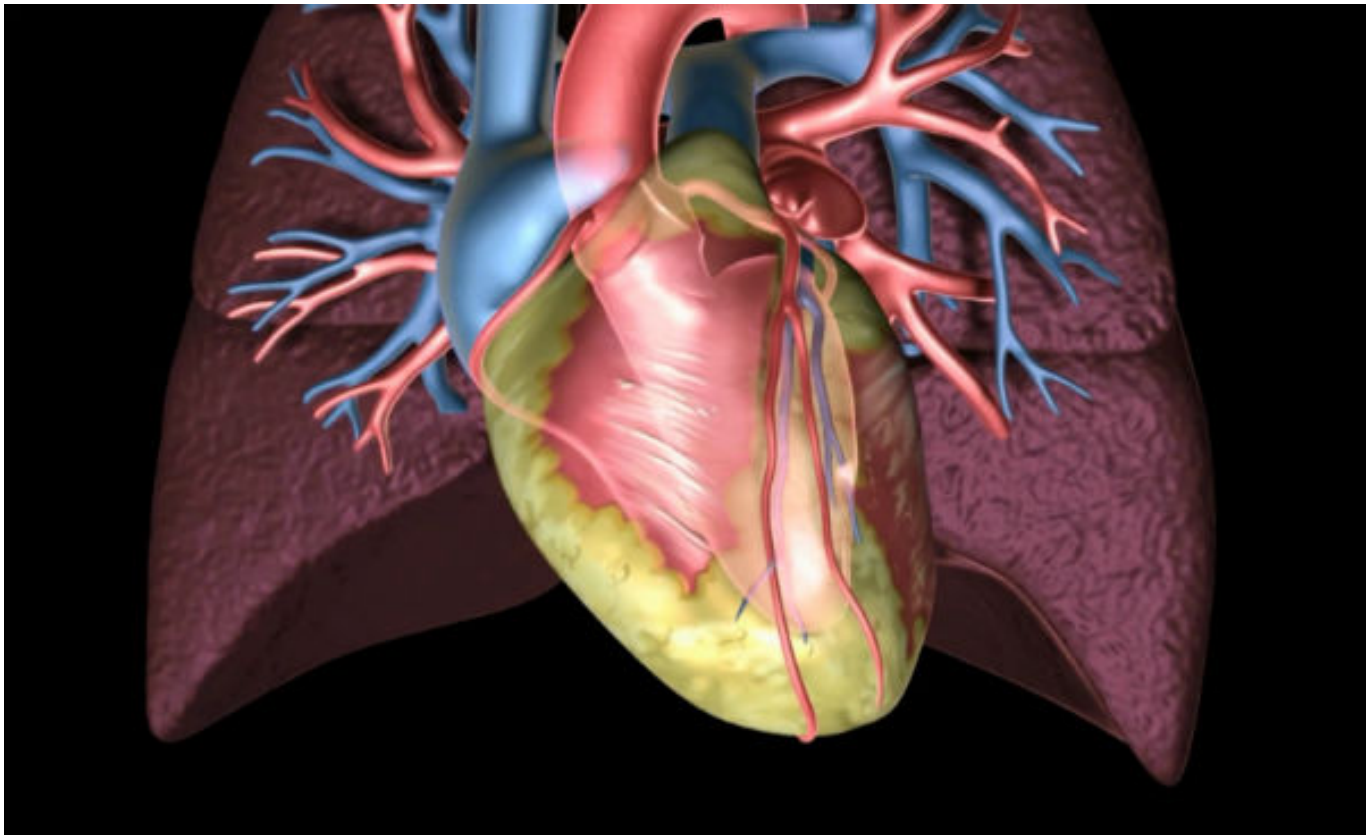
**#9 TMAO Assay Biomarkers for Biome**

TMAO (trimethylamine N-oxide) is produced by the body when your gut bacteria digest choline, which is found in egg yolks, red meat and dairy products. TMAO provides an accurate screening tool for predicting future risks of heart attack, stroke and death. Heart experts believe this discovery could lead to personalized nutrition recommendations to help patients reduce their cardiovascular risk.



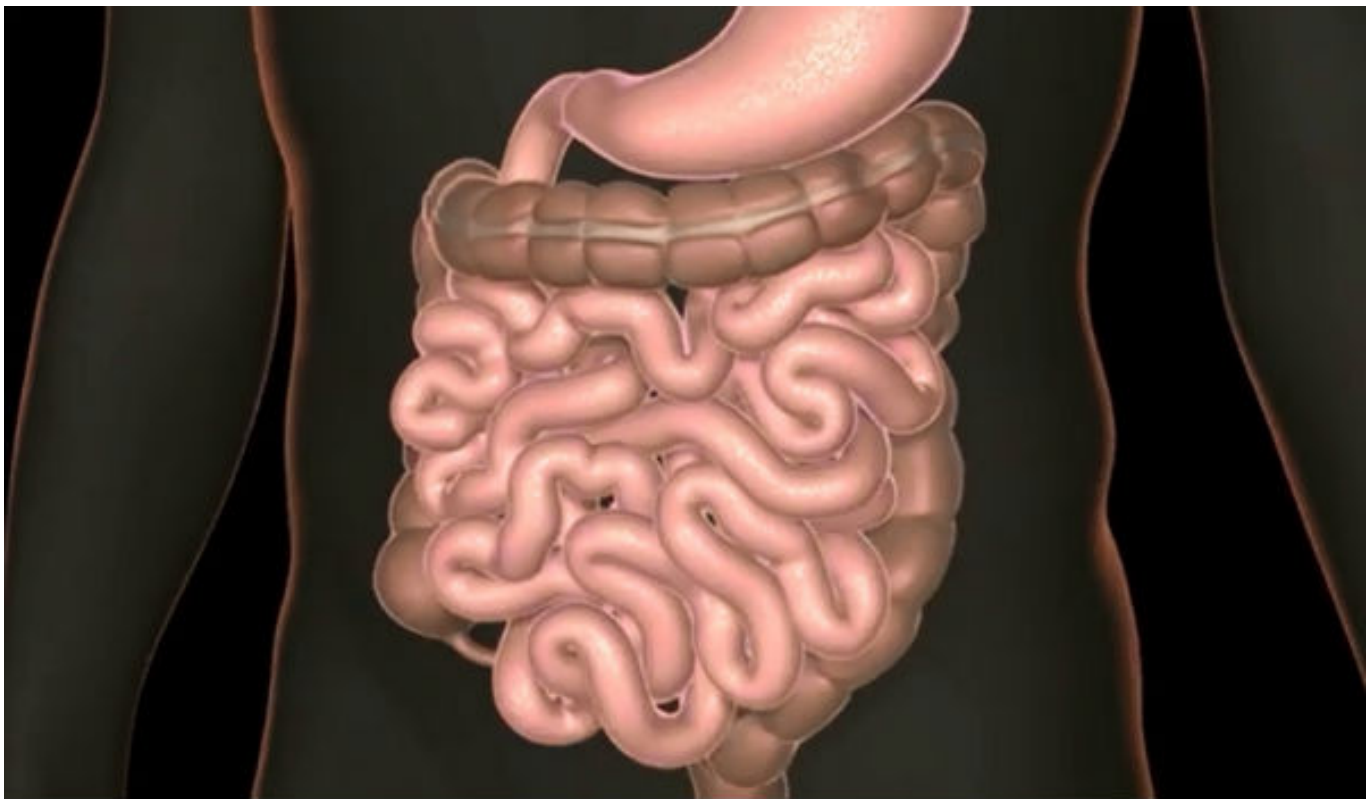
**#8 Computer-Assisted Personalized Sedation System**

A new computer-assisted, personalized sedation station aims to save an estimated $1 billion by eliminating the need for anesthesiologists in routine screenings such as a colonoscopy.



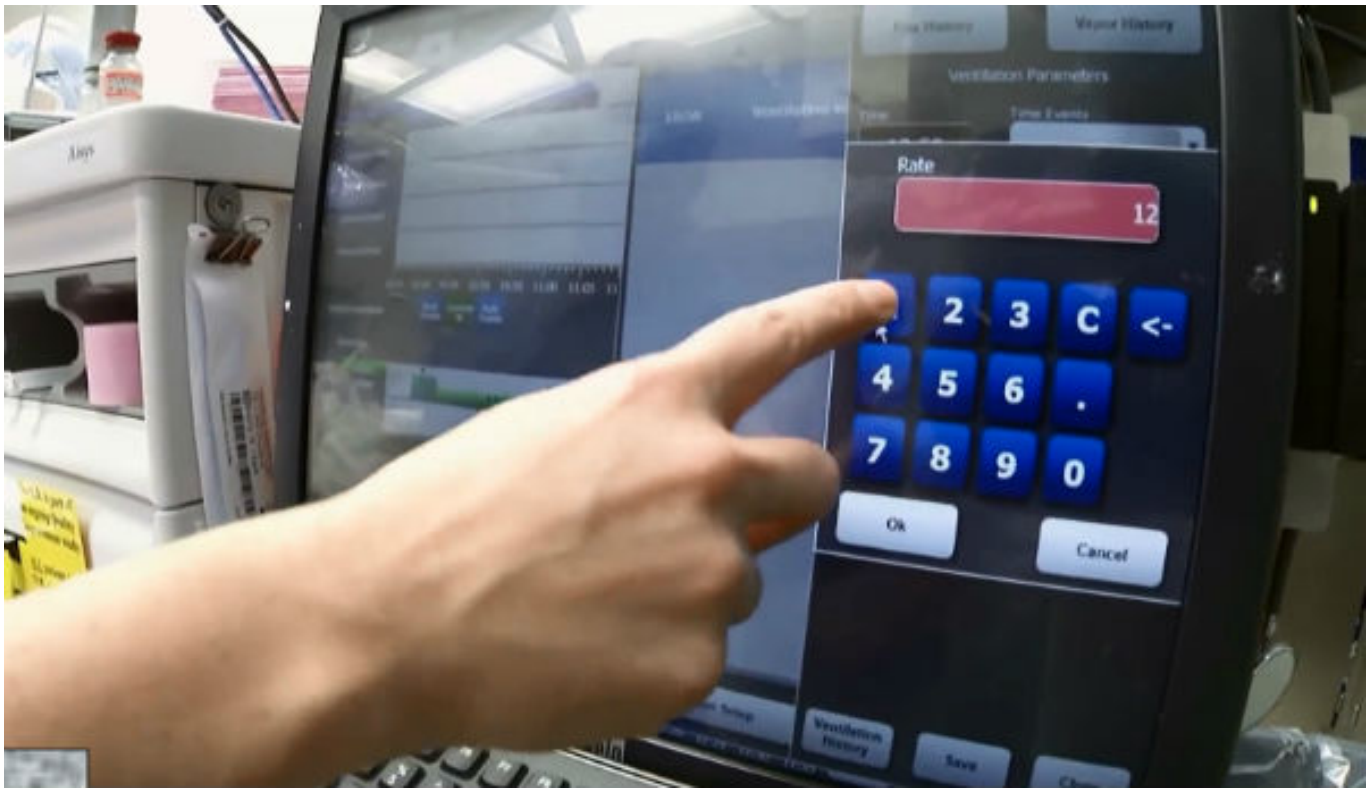
**#7 Relaxin for Acute Heart Failure**

Serelaxin, a synthetic version of the naturally occurring hormone human relaxin-2, has improved acute heart failure symptoms in clinical trials. Considered to be the first treatment breakthrough for acute heart disease in two decades, the drug increases blood flow throughout the body, which helps a poorly functioning heart work more effectively. It is also an anti-inflammatory, which means it can help prevent the damage heart failure does to the kidneys, liver and heart.



**#6 Fecal Microbiota Transplantation**

Fecal microbiota transplantation could become a primary therapy not only for C.diff infection, but also for inflammatory bowel disease. In this therapy, doctors use a colonoscopy or enema to transfer a liquid suspension made from a healthy person's fecal matter into a sick person's colon. The goal is to restore bacterial balance and fight infections and diseases.

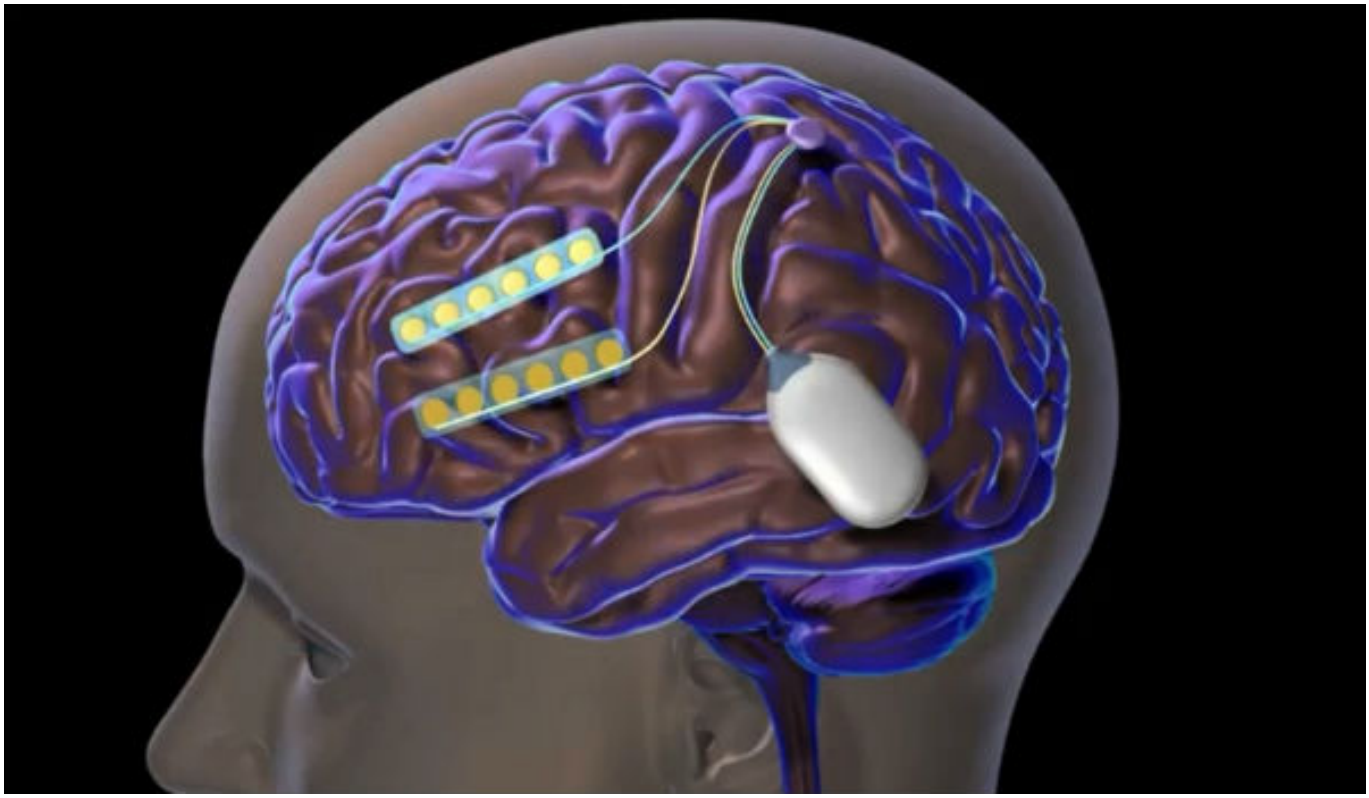



**#5 Perioperative Decision Support System**

The "Decision Support System" allows doctors to document everything that they're doing. And reminds them of the workflows that are important for targeted outcomes.

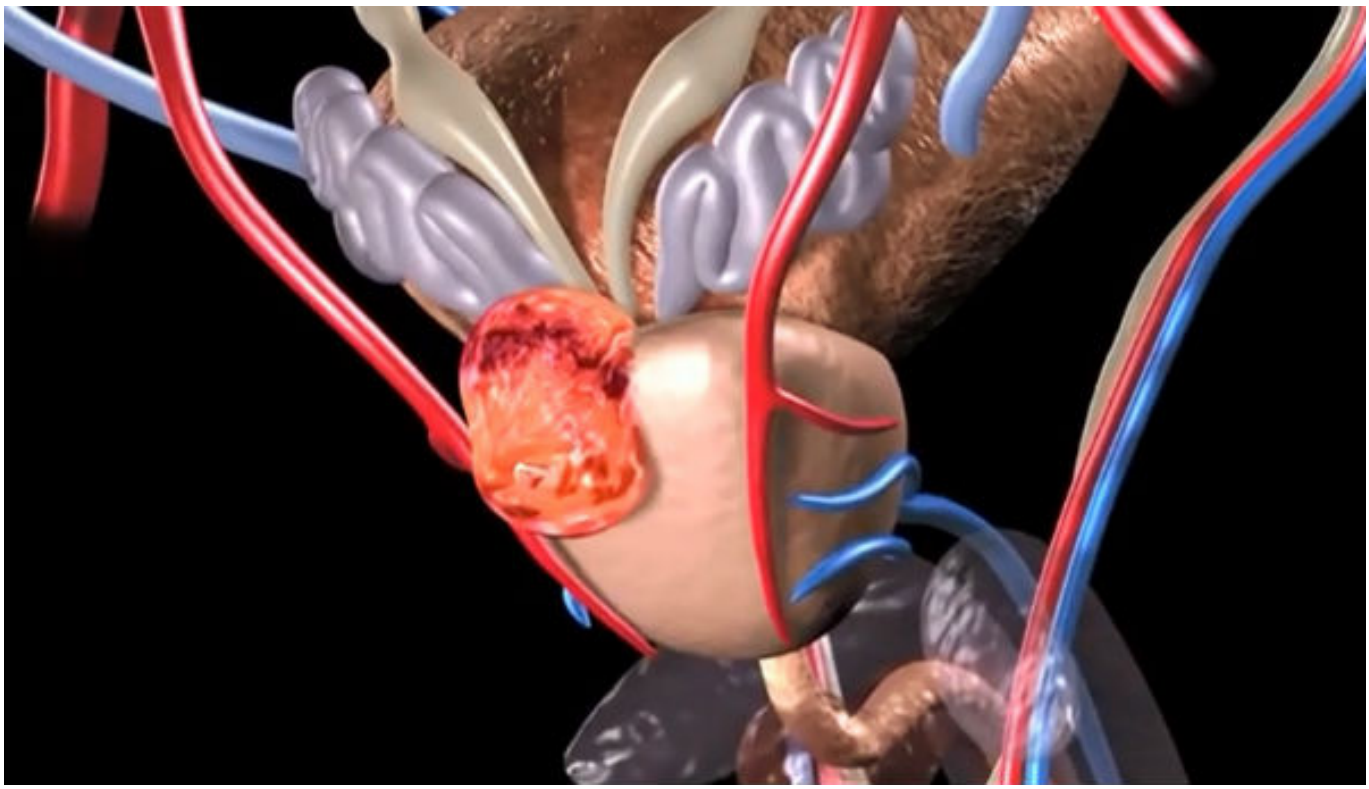
**#4 New Era in Hepatitis C Treatment**

The first all-oral hepatitis C treatment is moving through the final stages of FDA approval. This will be the first drug for patients with Genotype 2 Hepatitis C.



**#3 Responsive Neurostimulator for Intractable Epilepsy**

An implanted neurological device that can significantly reduce the frequency of epileptic seizures gained the unanimous backing of an FDA advisory panel in 2013.



**#2 Genome-guided Solid Tumor Diagnostics**

An innovative prostate cancer test became available in 2013 consisting of a 17-gene panel that can provide information to a man about how favorable his tumor biology is, enabling him and his physician to personalize his treatment plan.

**#1 Retinal Prosthesis System**

In 2013 the FDA approved a novel retinal implant system. This retinal prosthesis is a game changer for those suffering from Retinitis Pigmentosa, or RP and other sight-affecting diseases and is a huge step forward for people who had been without any available options for treating their blindness. Could this be the "bionic eye"?

Read: Cleveland Clinic Names Top 10 Medical Innovations For 2014 **[1]**

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